



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

shallows, in contrast to the above, plants are the more efficient land-builders; the developmental processes in such places are well known and need not be recounted here. WARMING also speaks of sandy plains that are subject to occasional inundation. Here algae play a great part in soil-making; it is common for a layer of Phycchromaceae to penetrate for three to five centimeters into the sand, cementing the grains together, and giving a greenish appearance to the ground. Many of the diatoms characteristic of such places are listed by habitats. The peculiar depressions of salt marshes, called "pans" by OLIVER and TANSLEY, are thought by WARMING to be formed where heaps of decaying vegetation have lain; the consequent destruction of the vegetation makes it easy for the waters to wash out the soil in such places.—H. C. COWLES.

Periodicity of sexual organs in Dictyota.—WILLIAMS, in the third contribution to his series of *Studies in the Dictyotaceae*,¹³ discusses the remarkable periodicity in the formation of the sexual cells in Dictyota. The sexual organs are produced during the fruiting season in fortnightly crops, synchronous with the spring tides, and a general liberation of the gametes takes place on a particular day, at a fixed interval after the highest spring tide, varying, however, in different localities. Of the factors (temperature, pressure, aeration, etc.) which fluctuate with the alternation of neap and spring tides, the one which seems to account most satisfactorily for the facts of periodicity is the increased illumination of the plant during the low water of spring tides. The times of initiation and liberation may be slightly accelerated or retarded by exceptional meteorological conditions, as when wind causes a difference of two or three feet in the height of water, or a rise of one inch in the barometer accompanies a depression of six or seven inches in the tide.—B. M. DAVIS.

Brown pigment of algae.—The generally accepted view that the color of the chromatophores of the brown algae and diatoms results from the presence of a brown pigment, phycophaein, in addition to chlorophyll, is challenged by MOLISCH,¹⁴ who believes that the phycophaein extracted from these algae is a post mortem product. He holds that the brown pigment is a single substance, phaeophyll, which passes readily over to chlorophyll when treated with hot water, alcohol, and other fluids. A similar brown pigment is found in the orchid, *Neottia nidus-avis*. Beside the phaeophyll, the brown algae and diatoms contain carotin and a bluish-green pigment, leucocyan.—B. M. DAVIS.

Bracts of Bennettites.—LIGNIER¹⁵ from a reexamination of his preparations of the involucre bracts of *Bennettites Morierei* concludes that in all the sterile scales, superficial or otherwise, which enter into the composition of the strobilus, the terminal enlargement is due to hypertrophy and does not result from a reduction of the bract.—W. J. G. LAND.

¹³ WILLIAMS, K. L., *Studies in the Dictyotaceae*. III. The periodicity of the sexual cells in *Dictyota dichotoma*. Ann. Botany 19:531-560. figs. 6. 1905.

¹⁴ MOLISCH, H., Ueber der braunen Farbstoff der Phaeophyceen und Diatomeen. Bot. Zeit. 63²:131-162. pl. 6. 1905.

¹⁵ LIGNIER, O., Notes complémentaires sur la structure du *Bennettites Morierei*. Bull. Soc. Linn. Normandie V. 8:(pp. 7.) 1904.